



## **CONTACT INFORMATION**

Mining Records Curator  
Arizona Geological Survey  
1520 West Adams St.  
Phoenix, AZ 85007  
602-771-1601  
<http://www.azgs.az.gov>  
[inquiries@azgs.az.gov](mailto:inquiries@azgs.az.gov)

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PRINTED: 11/19/2001

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: LEAD PILL

ALTERNATE NAMES:

FLORINE  
RED TOP

MOHAVE COUNTY MILS NUMBER: 407B

LOCATION: TOWNSHIP 12 N RANGE 14 W SECTION 21 QUARTER N2  
LATITUDE: N 34DEG 21MIN 54SEC LONGITUDE: W 113DEG 43MIN 34SEC  
TOPO MAP NAME: ARTILLERY PEAK - 15 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

FLUORINE FLUORSPAR  
SILVER  
LEAD  
GOLD  
SPECIMENS FLUORITE

BIBLIOGRAPHY:

ADMMR LEAD PILL - RED TOP MINE FILE  
JONES, MEL "RECONN. GEOL. EXAM OF MNG CLAIMS  
IN VICINITY OF POTTS MTN., MOH. CTY, AZ"  
1976 (ADMMR GEOLOGY FILE)  
CRONENWELT, CHARLES E., 1971, A GEO. RECON.  
RPT. LEAD PILL FLUORSPAR PROSP. IN FLUORSPAR  
GENERAL (ADMMR MERITZ COLLECTION FILE)

06/01/87

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

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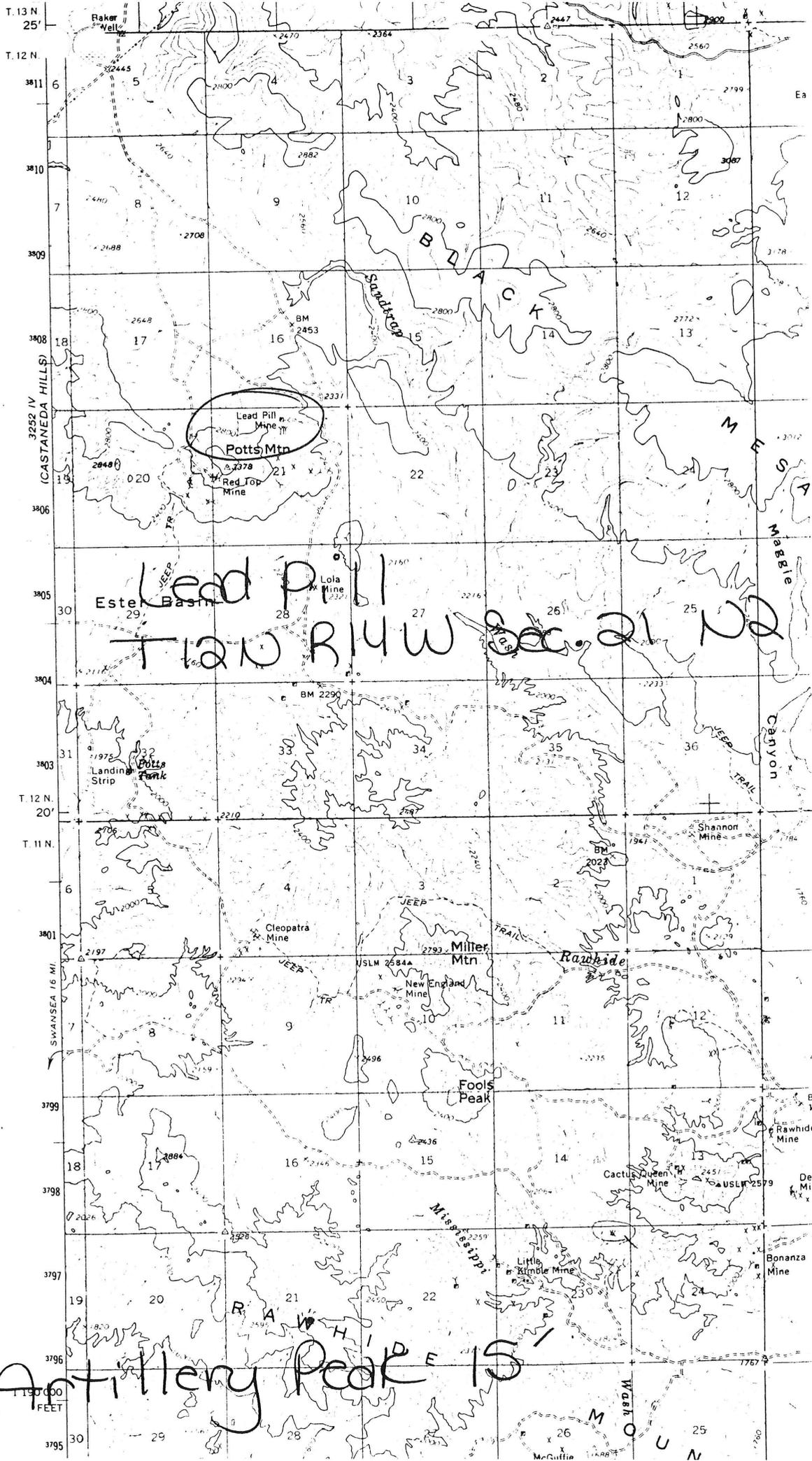
CURRENT STATUS: PAST PRODUCER

COMMODITY:

FLUORINE FLUORSPAR  
SILVER  
LEAD  
GOLD  
SPECIMENS FLUORITE

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IN VICINITY OF POTTS MTN., MOH. CTY, AZ"  
1976 (ADMMR GEOLOGY FILE)



Lead Pill  
TIAN RIUW Sec. 21 N2

Artillery Peak IS

Name of Mine or Prospect: Red Top Mine	12N	14W	21 cbb	Priority: C
Principal Minerals: Gold, Silver, Copper Sulfides(?)	1:250,000 Quad Prescott		7.5' - 15' Quad Artillery Peak	
Associated Minerals: Quartz, Hematite, Malachite, Limonite	District Owens		Principal Product Silver, Copper (?)	
Type of Operation: Underground: Shafts, Adits	County Mohave	State AZ	Type of Deposit Vein	
Ownership or Controlling Interest: Consult current USBLM mining claim records				
Access: From Brown's Crossing proceed northwest on Alamo Road for 15 miles. Turn left on unimproved road for 6 miles. Mine is shown on topographic quadrangle.				
Structural Control or Geological Association:  "Older Precambrian Age, Schist." <sup>1</sup>  " The Red Top Mine is developed by several adits and shafts on a fault zone bearing 280/50NE. The fault zone is contained in rhyolite extrusive flows which overlie Precambrian porphyritic quartz monzonite. Evidence of a detachment surface is seen at lower elevations. The fault zone and associated alteration vary in width from 3 to 6 feet. Alteration minerals are quartz, hematite, limonite, malachite, and azurite. Possible gold and silver mineralization." <sup>2</sup>				
Age of Mineralization:				
Production History		Geochemical Analyses		
Small to moderate production (1981) based on dump size and developmental work. <sup>2</sup>		<u>Samples</u> (1981) <sup>2</sup> 81DTE730-1 altered fault breccia 81DTE730-2 high grade dump material		
References				
1) Wilson & Moore (1959) Geologic map. 2) Exploration Research Associates Incorporated, Field Reconnaissance, July 1981.				



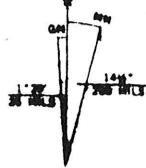
Mapped, edited, and published by the Geological Survey  
 Control by USGS and USC&GS

Topography by photogrammetric methods from aerial  
 photographs taken 1964. Field checked 1966

Polyconic projection. 1927 North American datum  
 10,000-foot grid based on Arizona coordinate system, west zone  
 1000-meter Universal Transverse Mercator grid ticks,  
 zone 12, shown in blue

Blue hatching indicates areas to be submerged by Alamo Reservoir  
 at elevation 1870. Areas covered by dashed light-blue pattern

ARTILLERY PEAK  
 Quad



CONTOUR INTERVAL  
 DOTTED LINES REPRESENT  
 GRADE OF 100 FEET

A

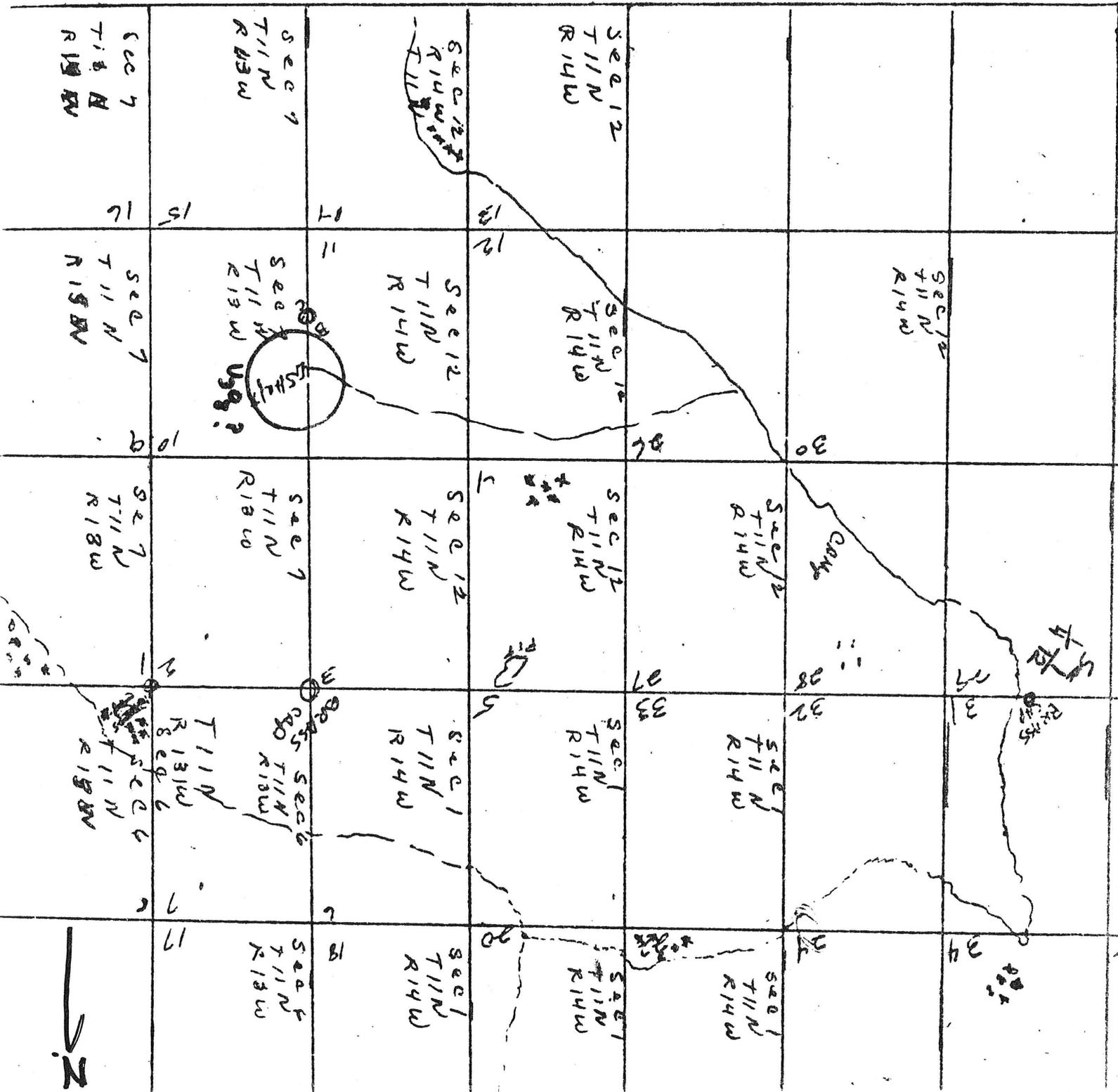
SWANSEA  
 2000 111

ROADS  
 BRSS-CAP  
 DRILL SITES  
 234

182

S

Incl #2



# Affidavit of Labor Performed and Improvements Made

STATE OF ARIZONA, }  
 County of Maricopa } ss.

Melvin H. Jones being duly sworn, deposes and says that he is a citizen of the United States and more than twenty-one years of age, and resides at Wickenburg in Maricopa County, State of Arizona, and is personally acquainted with the mining claim known as Western Nos. 1 to 7, incl.

mining claim, situate in Owens Mining District, County of Mohave, State of Arizona, the location notice of which is recorded in the office of the County Recorder of said County, in Book 140 of Records of Mines, at page 258-264; that between the 31 day of October, A. D. 1973, and the 27 day of August, A. D. 1974, at least seven hundred (\$700.00) dollars worth of work and improvements were done and performed upon said claim, not including the location work of said claim. Such work and improvements were made by and at the expense of

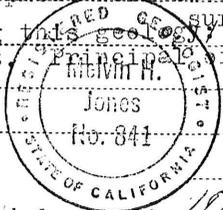
Howard S. Gable and Unified Investors Corporation lessee & (of Kingman, Arizona) owner of said claim for the purpose of complying with the laws of the United States pertaining to assessment of annual work, and

Melvin H. Jones

were the men employed by said lessee & owner and who labored upon said claim, did said work and improvements, the same being as follows, to-wit:

- a. Geological survey (Preliminary Geology Evaluation report). Examination and study of all the Western claims listed.
- b. Physical investigation and study including examination of shafts, adits, stopes and mineral outcrops. This includes mineral identification, sampling, assaying, research, stratigraphic study, mapping, ore evaluation, and recommended action to be taken in the future. The cost of this Geology Survey is in excess of \$700.00.
- c. Basic findings are that the Barite on portions of the claims is of commercial grade and can be mined at the present time on a limited scale at a profit. On the old workings of the "Red Top" mine, valuable silver, lead, gold and copper values are present, in presently unknown quantities, which can be mined at a profit at today's prices. Drilling and other exploration and development work should be continued.

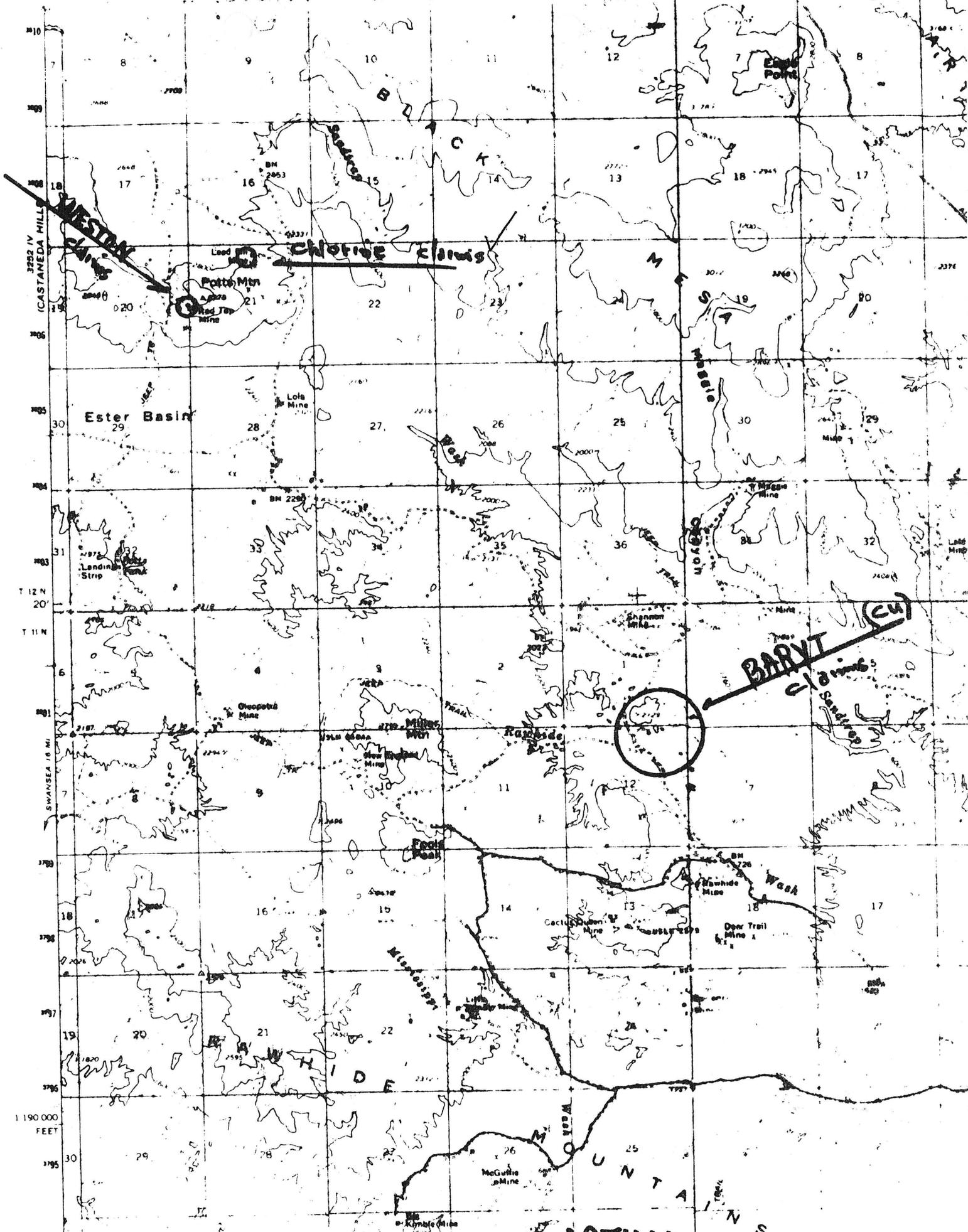
d. Person making this geology survey Melvin H Jones, Registered Mining geologist, Principal office address: Box 1, Montello, Nevada, 89830.



Subscribed and sworn to before me this 10 day of Sept, A. D. 1974

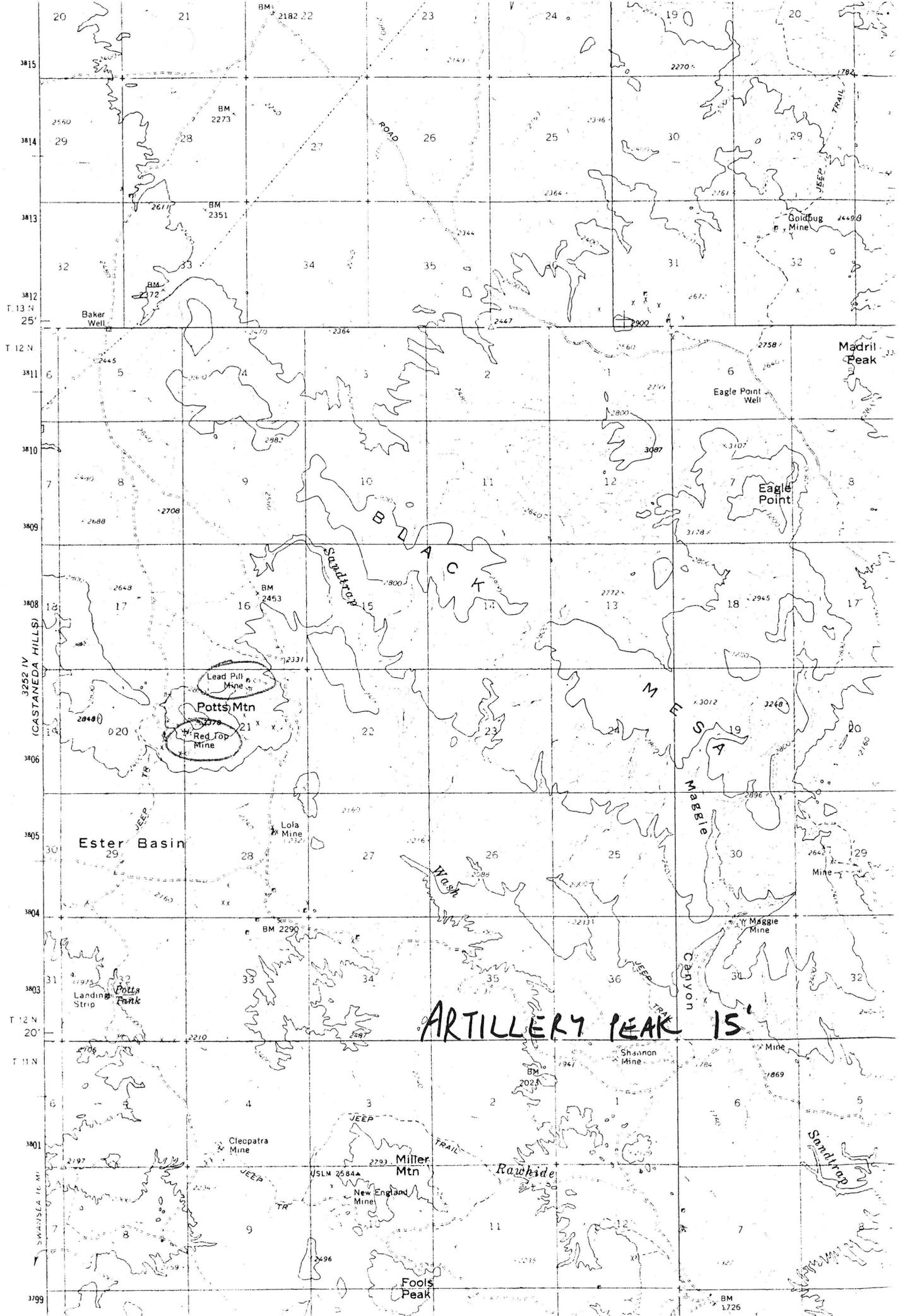
(My commission expires.....) Melvin H Jones  
Karl E. Peterson  
 Notary Public.

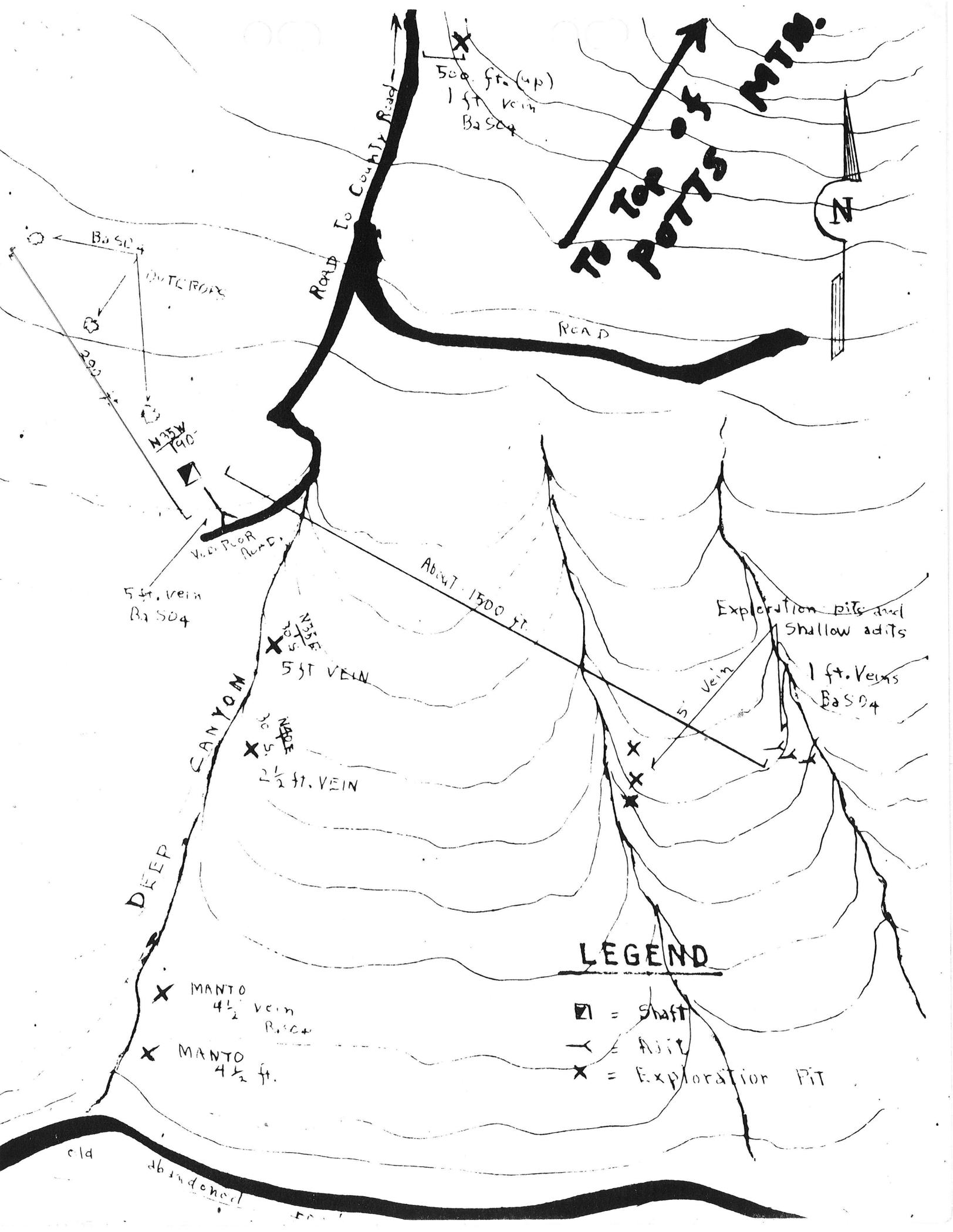
Copy of Sealed original



INCL #1

ARTILLERY PEAK (quad)  
ARIZ.



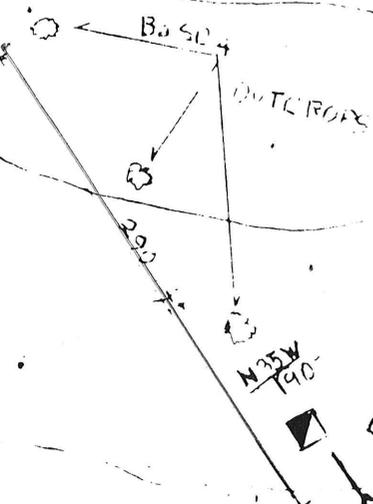


**TO POTTS MTR.**

500 ft. (up)  
1 ft vein  
BaSO<sub>4</sub>

ROAD TO COUNTY ROAD

ROAD



5 ft. vein  
BaSO<sub>4</sub>

About 1500 ft.

Exploration pits and shallow adits

20' 5' VEIN

5 ft. VEIN

1 ft. veins  
BaSO<sub>4</sub>

20' 5' VEIN

2 1/2 ft. VEIN

5' vein

DEEP CANYON

**LEGEND**

- ◻ = Shaft
- ⋈ = Adit
- ✕ = Exploration Pit

✕ MANTO  
4 1/2 vein  
BaSO<sub>4</sub>

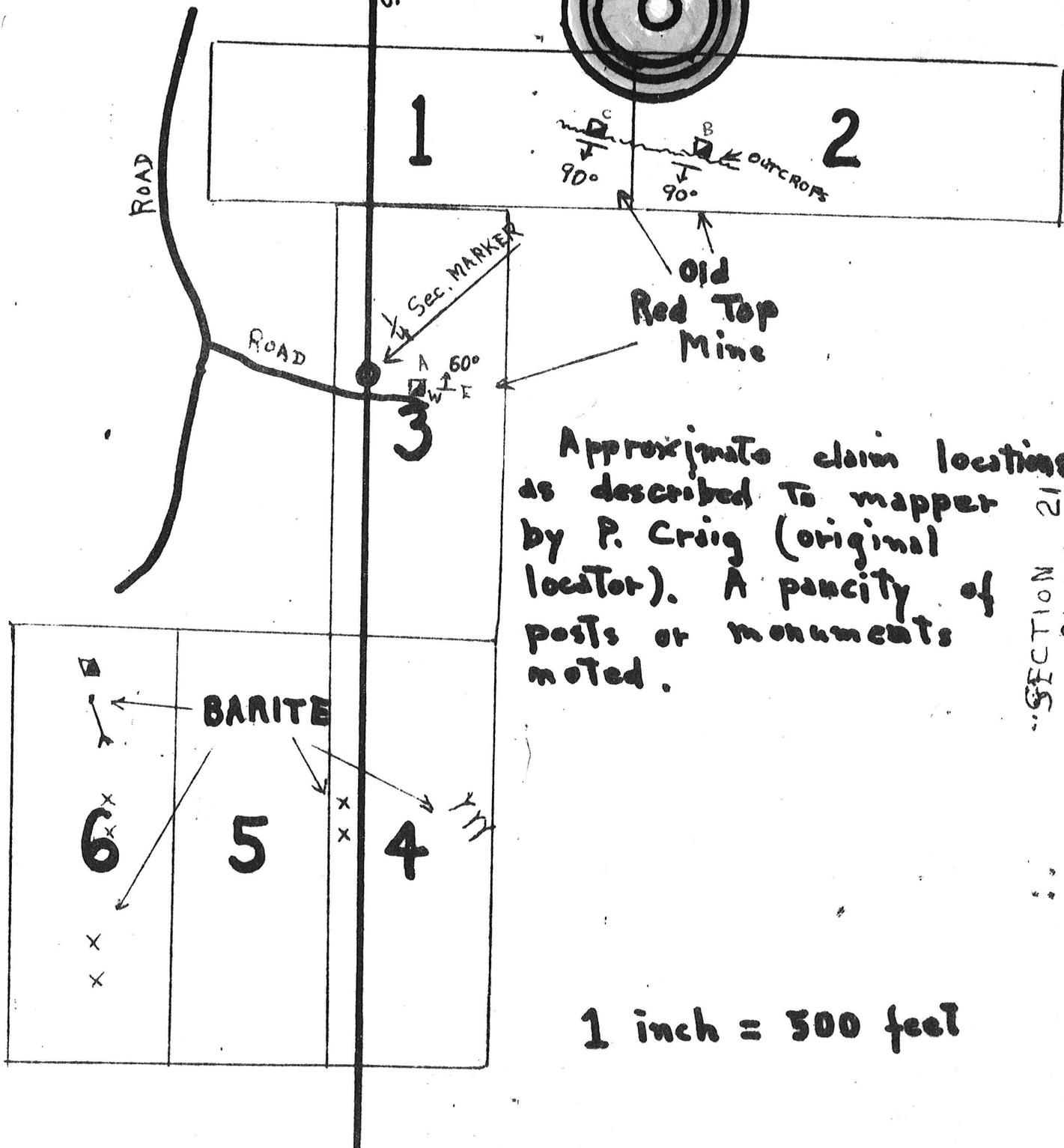
✕ MANTO  
4 1/2 ft.

old abandoned

# WESTON CLAIMS

SECTION 20 T12N R14W

TOP OF Mtn.  
POTT'S



Approximate claim locations as described to mapper by P. Craig (original locator). A paucity of posts or monuments noted.

SECTION 21 T12N R14W

1 inch = 500 feet

# Reed Engineering

1140 N. Lemon Street, Orange, California 92667

## SPECTROGRAPHIC ANALYSIS

For:

\*Elements not detectable below .005%

+

Date: SEP 10 1973

+

Mr. Melvin Jones

Sample No. Red Hill

Film No. 02

+

Tests Recommended:

### Approximate Values

### QUALITATIVE

### Approximate Values

	Lbs. per ton	Value per ton	Percent
Aluminum	58	.58	2.9
Antimony			
Barium	54	\$1.08	2.7
Beryllium			
Bismuth			
Cadmium			
Calcium	30	.30	1.5
Cesium			
Chromium	---	---	trace
Cobalt			
Columbium			
Copper	.1	---	.005
Fluorine			
Gallium			
Gold*			
Hafnium			
Indium			
Iridium*			
Iron	18	.20	.9
Lead	20	\$3.20	1.0
Lithium	.02	---	.001
Magnesium	6	.03	.3
Manganese			
Mercury			
Molybdenum			
Nickel			
Osmium*			
Palladium*			
Platinum*			
Potassium	8	.16	.4
Rhodium*			
Rubidium*			
Ruthenium*			
Silver			
Sodium	8	.08	.4

	Lbs. per ton	Value per ton	Percent
Strontium	.2	---	.01
Tantalum			
Thallium			
Thorium			
Tin			
Titanium	12	\$1.20	.6
Tungsten			
Vanadium			
Zinc			
Zirconium			

### RARE EARTHS : none

	Lbs. per ton	Value per ton	Percent
Cerium			
Dysprosium			
Erbium			
Europium			
Gadolinium			
Holmium			
Lanthanum			
Lutetium			
Neodymium			
Praseodymium			
Samarium			
Terbium			
Thulium			
Ytterbium			
Yttrium			

Silicon, Water, Gases----- 89.2 Percent

### RADIOMETRIC ASSAY

(e) Uranium Oxide trace Percent

C-3

LEAD PILL

MOHAVE COUNTY

NJN WR 4/3/87: Dick Morris (c) reported that Dave Shannon (c) has produced green fluorite crystals from the Lead Pill and Red Top (file) and wulfenite from the Cactus Queen (Iron Clad) file, Mohave County.

---

RA

circulate the  
set up file —  
Aug 15, 1973

T  
K

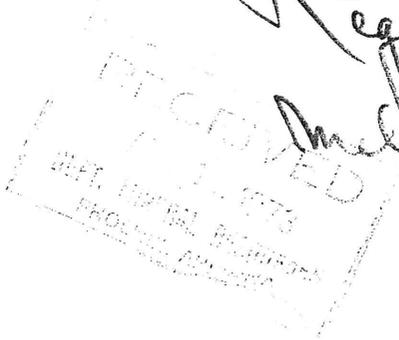
To - John Jett -  
Chief - Ar. B. of Min. R.

Dear John -

✓ You in some degree  
on the "Lead Pill" and  
"Red Top" mines - Mehan  
County -

Regards

Michael Jones



Arizona Department of Mines and Mineral Resources

INFORMATION FROM MINE CARDS IN MUSEUM

ARIZONA

MOHAVE COUNTY

MM 4807 Fluorite

MM 4808 Fluorite

MM 4809 Fluorite

Off Alamo Rd. from Wickiup, <sup>P</sup>Lead Hill Mine

MM 4810 Fluorite

MM 4811 Fluorite

MILS # 4076

2-AKA's

Lead Hill (file)



FROM THE DESK OF

**Jan Daily**

Box 307  
Winslow, AZ 86047  
Sept. 6, 1974

Dear Mel:

Here's the book and page numbers of the Weston Claims. (I called the attorney in Las Vegas and got info as Pearl and Howard evidently are the only others who have a copy of the agreement).

	<u>Page</u>	<u>Book</u>
Weston #1	258	140
#2	259	"
#3	260	"
#4	261	"
#5	262	"
#6	263	"
#7	264	"

There are seven claims listed in the agreement, so the attorney's secretary told me. I think Pearl said there were only 6, but there are 7.

Sincerely,

MELVIN H. JONES

*Mining Geologist*

~~Box 1, - Montello, Nevada 89830-~~

PRELIMINARY GEOLOGY EVALUATION REPORT ON THE WESTON CLAIMS,  
POTTS MOUNTAIN, OWENS MINING DISTRICT, MOHAVE COUNTY, ARIZONA.

At the direction of Mr. Howard S. Gable, Box 946, Kansas City, Mo., 64141 (Lessee of the claims), the undersigned, assisted and accompanied by P. Craig and P. Dailey (representing claim owners), visited the Weston claims on August 27, 1974 and did necessary field work, preliminary to preparing this report. However, the claims had been examined on two (2) previous occasions on October 31, 1973 and August 30, 1973, by the writer. Sampling and investigation of the old workings, outcrops, and formations was also accomplished on these previous visits.

The claims consist of six (6) unpatented lode mining claims (see map, Exhibit B), and are located on Potts Mountain in the Black Mesa area, North of the Rawhide mountains, and are near the road to Yucca to Almo Day. The claims also take in the old workings of the Red Top Mine (see map, Exhibit A).

While no old records could be located, it is apparent that the mentioned mine, and the Lead Pill mine (on the other side of Potts mountain) shipped some ore in the distant past; probably, silver, lead and minor copper. The Barite adit and Barite exploration pits, were probably opened up at a much later date (see sketch, Exhibit B).

GEOLOGY

As an intragel part of this report, is the earlier study "Preliminary Geology examination of Barite Claims on Potts Mountain ---" written by the undersigned (see exhibit D). This report covers the Potts Mountain geology, in general, and there is no need to be repetitive. But there are some differences

in the Red Top area, and Barite is not the primary ore there. Some factors will be emphasized pertaining to the Red Top ore.

The matrix that carries the valuable ore is an igneous intrusive rock that grades from Dacite to Rhyolite. Potts Mountain structurally is a diatreme and it stands out alone from the Artillery Mountains on the East and the Rawhide Mountains to the South, and separated from the latter by a Quaternary alluvial plain (Ester Basin). Potts Mountain is probably Cretaceous-Tertiary in age, and the mineralization is Hypogene Larmide.

At this point, it will be well to mention that Potts Mountain raises quite steeply towards the North from the Barite outcrops (see sketch, Exhibit B). A rather poor road goes to the Red Top shaft <sup>2417</sup> (marked A). The old workings here are rather extensive, and much ore has been removed in the past. A stope that is opened to the surface, dips downward towards the North at about 60 Deg., and strikes East and West. The ore vein there ranges in thickness from 4 to 5 feet, and in places the Mangocalcite prevails containing Silver, Lead, Fluorspar and Barite, in varying amounts. At other locations thereat, a quartz vein is seen that carries copper, silver, and some gold. (Sampling results will be discussed later in the report). For the most part, the mentioned shafts, stopes, <sup>etc</sup> were given only a cursory examination, or in some cases, only viewed from the surface, as the workings appeared too dangerous to enter (single-handed). Cave-ins were everywhere, some stulls and timbers were down. Exploration of shafts B and C (see map) will be most difficult as they are vertical and their depths are 60 feet, or more, and this will require the affixing of chain ladders (for future investigation).

From shaft A (on sketch) there is a steep trail that leads up to Shafts B and C. In going up this steep trail, one crosses several outcrops of the Mangocalcite (black calcite) ore bearing material. Several were about two(2) feet in thickness and strike East to West with a vertical dip. Apparently, these small veins had not been opened up. Shafts B and C are on a vertical vein of the mangocalcite that is about four(4) to five (5) feet in thickness. In the past, any ore taken from this area was probably chuted to lower levels in large metal pipes (several lengths of this old pipe are still there). The length of the mentioned vein was not ascertained as the terrain is very steep, rough and difficult, but it appears that much ore remains. This vein is not far from the top of Potts Mountain (South side).

It will be noted that most of the samples taken by the writer, have been assayed for gold content (as well as for the obvious metals). This was done on a hunch, and the results have been very encouraging. It is understood previous owners ignored the gold, unknowingly.

The Barite sampling, which is covered in Exhibit D, turned out some highly satisfactory results. On the examination of the claims on August 27, 1974 (the current one), attention is directed to the old Red Top workings, and these results, are likewise, most encouraging. Also one should note the remark on the Currey assay report (Exhibit C) quote "Your B sample showed some Pt (Platinum) minerals. Also enough Pt to give the gold a lighter color". This of course, means that future samples should be tested for the Platinum group.

A summary of the sampling and results follow:

Non-metallics - Barite (see exhibit D) -  
Barium sulphate - Composite grab sample from barite exploration

pits - BaSO<sub>4</sub> = 81.74% - can be upgraded to drilling mud grade (SG 4.2 to 4.3) - Value per ton is \$40.00 to \$47.00 (current prices).  
 Barium sulphate - channel cut from Barite adit - BaSO<sub>4</sub> = 78.36%

Non-metallics - Fluorspar (see exhibit D) -

Calcium Floride - From Barite samples above - CaF<sub>2</sub> 4.53% - suitable milling can recover this fluorspar - value per ton is \$77.00 to \$83.00. (Note: Florite can be seen on other samples, also).

Metallics. (Note: these samples are from the old Red Top area)-

Samples from lower level shaft (and adit) (see A on map)		Value	
Sample	Description	Au (oz)	Ag (oz) per ton
A	Chip sample from pillar in stope	1.60	7.20 \$299.32
2	Channel cut, 100 ft fr portal, 2 ft vein	1.28	4.97 \$140.54
1	Channel cut, near raise, 2 ft vein	.30	.70 \$ 31.78
Samples from near upper shaft B (see exhibit B)			
B	Grab sample from dump at shaft B	8.84	5.96 \$1421.15
3	Channel cut, vein near collar, 4 ft vein	.40	.20 \$ 40.51
Sample from near upper level shaft C (see exhibit B)			
C	Grab sample from dump	.16	9.84 \$ 65.62

All of the samples contain lead, and some show copper. As they are comparatively minor quantities, this has not been emphasized. Both the Barite and Magnesite samples contain lead, that averages about 1%. Recovery of this lead will add \$4.50 to each ton (Pb at 24¢ per lb) From the sampling outlined above, copper is most minor. (see Exhibit C for assay certificates).

OTHER CONSIDERATIONS.

In walking over the mining property, F. Craig, (Weston claims locator) pointed out the locations of the claims, and this was most confusing as there are few posts or monuments. The map (Exhibit B) was made from this oral description, only, as no corner posts were observed. Several "discovery" posts or monuments were pointed out, however markers defining the claim boundaries are lacking. This could bring up some questions about the validity of the Weston claims. It is of course understood, that with the passage of time, many posts (or monuments) on mining claims could be knocked down by cattle, or the elements, and carried away. But a portion of the markers should be discernable. It appears to be a matter of some urgency to have the Weston claims surveyed and re-posted.

Getting into the metallurgical field, it is to be pointed out that among the refractory silver (and gold) ores, that are difficult to obtain high recoveries, are the manganese, iron, carbonates and oxides, as well carbonaceous gold ore. In this case, ordinary cyanide recovery methods do not work satisfactorily. The Red Top manganese calcite ores may well fit into this category. The Bureau of Mines procedure of using a sulfur dioxide-sodium chloride leach is helpful (BofM-RI 7736).

### CONCLUSIONS.

A commercial grade of Barite is on the western claims. An inferred tonnage of 100,000 tons have been estimated.

The old Red Top mine area on the Western claims shows much promise in the field of silver, gold and lead recovery. While sampling to date has been superficial, the average of six (6) samples taken show values in excess of \$200.00 per ton. Before a determination to engage in mining the Red Top ores is arrived at, more sampling and exploration should be undertaken.

The shafts and drifts on the Red top will have to be carefully examined to determine values and reserves of ore. This will require portable chain ladders and the observance of all safety precautions.

A shallow drilling program should be undertaken, following the shaft and underground exploration, outlined above. Pertinent ore outcrops should be drilled by qualified operators, and the cores or cuttings assayed. A portable two man drill could do this.

Attention should be paid to possible Platinum group metals in the ore.

The initial action to be taken should be to have the

Western claims surveyed by a competent land surveyor. This should be followed by appropriate posting or monumenting. Amended claim location notices can be recorded, if applicable. It may be determined that additional claims should be located.

RECOMMENDATION

The Western lode mining claims are most valuable and should be retained. Suggestions outlined in "Conclusions" above, should be carried out to develop the property into a producing mine. The scope of future operations can be determined by further sampling, exploration and determination of reserve ore.

Respectfully submitted

Box 406,  
Wickenburg, Arizona.  
August 31, 1974.

MELVIN H JONES  
Mining geologist

I N D E X

Exhibits

subjects

- A                    General map of area (Artillery Peak Quad.)
- B                    Map of Weston claims
- C 1                   Assay certificate        Sept ., 3, 1974  
2                   Assay certificate        Sept.,5, 1973  
3                   Spectrographic analysis Sept 10,1973(Red Hill)  
4                   Spectrographic analysis Sept 11, 1973(Black)  
5                   Assay certificate Nov.,23, 1973  
6                   Assay certificate Nov.,30, 1973  
7                   Assay certificate Aug.,14, 1973  
8                   Assay certificate Aug.,21,1973  
9                   Assay certificate Sept.,11 1974
- D                    Preliminary Geology Examination of Barite  
claims on Potts Mountain, Mohave County, Ariz. 3 Dec., '73  
(with inclosures).

3 December, 1973.

PRELIMINARY GEOLOGY EXAMINATION OF BARITE CLAIMS ON POTTS MOUNTAIN, MOHAVE COUNTY, ARIZONA.

At the request of Mr. Howard S. Gable, Box 946, Kansas City, Mo. 64141, the undersigned spent a day examining the Weston Barite claims on the SW side of Potts Mountain, Mohave County, Arizona on October 31, 1973 (Is North of Almo lake, Arizona). Mr. and Mrs. Jay Craig (owners with other associates) were also present. Two other brief visits to this property were made previously in connection with looking over other mining claims in the area. An alledged 18 foot Barite exposure that was pointed out to me from a distance then, turned out to be a 5 foot facies. The principal purpose of this investigation is to make an estimate of tonnage. This is almost impossible to do without a drilling program, other than on an inferred ore basis.

A sketch of the general area has been made and is attached as exhibit "A". Several additional exposures of Barite were seen, which were not observed on the previous visits (these are shown on the sketch).

GENERAL GEOLOGY

To the Southeast of these claims are the Artillery mountains, which is one of the richest manganese areas in the United States. The portion of Potts mountain where the Barite is present, as a vein and replacement mineral, appears to be a volcanic extrusive such as dacite grading into rhyolite of Tertiary age. The Barite is epigenetic, which means it formed in faults, cracks, and fissures at a later date, that opened up in the original rock.

Obviously, with the Barite is some Fluorite. In the general area of Potts mountain are old exploration shafts, adits, and pits showing mangocalcite carrying small amounts of Silver, Lead, and Fluorspar, with minor quantities of Barite. All of this work dates back 50 years or more.

A general picture of Barite deposits and uses might be in order (Source USGS, Prof. Paper 820, 1973). In the United States, about 80% of all Barite is used as drilling mud (90% grind minus 325 mesh). The remaining 20% goes into glass, paint and rubber as a filler and pigment. Also is used in ceramics and for medical purposes.

In the West, many Barite deposits are in vein and cavity filling deposits in faults, fractures, joints, brecca zones and solution channels. Deposits are mostly associated with igneous rocks. Other deposits in the West are known as "bedded deposits", and the Weston claims fits into this particular category. These are usually dark beds of Barite with small fragments of other rocks (chert, mangocalcite, feldspar, etc.), and the barite itself can be in nodules and rosettes (some with needle fine crystals). This type of deposit forms much in the same way as sedimentary formations by chemical processes of concentration and deposition. The chemical features include the effects of contact metamorphism, which includes coarsening of grain size and bleaching of dark color.

BARITE DEPOSITS. On the road as we approached the Potts mountain barite area, an exploration pit was noted about 500 feet above the road on the steep West side of the mountain. (see sketch). This was examined and showed a 1 foot vein of rich barite. This is not a mineable width for underground mining, in the opinion of the writer.

Near the end of the road to the South, there is a shallow shaft about 17 feet deep with what appears to be a 5 foot vein of barite. With no ladder, this could not be examined carefully. A short distance down the mountain is an adit (about 50 feet in depth) which is on the same vein as the shaft. Small outcrops were traced on the surface from the portal (and thru the shaft) for a distance of 290 feet, with a strike North 35 degrees West.

On the East side of the canyon (South of the mentioned portal), another 5 foot vein of apparent ore was noted. This had been opened up in the form of a pit. This has a strike of North 35 degree East and a dip of 45 degrees South. Extent and depth of this vein can only be guessed at.

Further down the same canyon, a 2 1/2 foot vein of barite was noted at another exploration cut. This had a strike of North 40 degrees East, with a vertical dip. The depth and extent of this deposit is unknown.

Near the bottom of the same canyon, a 4 1/2 foot vein (or bed) in the form of a mantle has been opened up and exposed. A width of 10 feet could be seen.

There is an abandoned road (poor condition) at the bottom of the mentioned canyon. (This road looks like it had been constructed years ago for the purpose of removing ore.). About 100 feet above this road is another pit showing a mantle of barite about the same size as the previously mentioned one. It is about 50 feet below (the other mantle).

On a ridge about 1500 feet to the Southeast of the shaft (see sketch), there are a series of small exploration pits and shallow adits showing some barite. Several showed 1 foot exposures, but no mineable widths were seen.

There is a good possibility that there are other barite deposits in the area, which could be found by careful exploration. I would again like to emphasize that there is no substitute for drilling to determine the tenure and extent of the ore bodies.

TONNAGE. Using the shaft (and vicinity) as a guide and assuming the ore body has a vertical depth of at least 50 feet, (length 290 feet and width 5 feet) one arrives at 10,168 short tons of barite ore. A cubic foot of barite (SG 4.5) weights 280.3 pounds. I am also assuming that the other mineable ore bodies have similar tonnage making the inferred ore total tonnage 50,000 short tons. In considering the Potts mountain area, generally, one could arrive at a hypothetical figure of 100,000 tons. There are probably many other exposures undiscovered.

SAMPLING AND VALUES. A channel cut sample was taken across the facies of the vein at the location of the last work accomplished in the adit (near the mentioned shaft). This sample was sent in for  $\text{BaSO}_4$  and  $\text{CaF}_2$  assays. Other samples were taken from the pits and outcrops, elsewhere, but they were not sent in for assay, as all samples appeared to vary but little in Barite content. Results of the adit tests are: (exhibits B&C).

Barite 78.36%

Fluorspar 4.53%

On the previous visit to the claims, a grab sample (composite) was taken mostly from the dumps. The assay on this sample was:

Barite 81.74%

On considering the recent sample ( $\text{CaF}_2$  4.53% and  $\text{BaSO}_4$  78.36%) it can be seen that there remains 17.11% of extraneous material such as black calcite, hematite, rock fragments, quartz, etc.

The foregoing assay results places the ore a shade under specifications for dry drilling mud grade: 83 to 93%  $\text{BaSO}_4$ , 3 to 12% Fe, and a specific gravity of 4.2 to 4.3. According to the Nov., issue of E&MJ, drilling mud Barite is worth \$37. to \$44.00 per ton. It is possible that some barite buyers may accept the Weston claims barite (as is) without local concentration, at a penalty price. With the recent approval of the Alaska pipe line (and off shore drilling) a much greater demand should develop for barite.

BENEFICIATION. It may be pertinent to go into barite beneficiation. This can be done by tabling and/or froth floatation. Where adequate water is available, it can be rapidly and simply accomplished by jigging. The ore can be ground by ball or Raymond mills, and magnetic impurities taken out by magnetic separators. The fluorspar can be recovered as part of the floatation process.

A typical barite beneficiation operation would be as follows: (Bur. of Mines, RI 5651, "Barite deposits of Arizona," 1960) The ore treated in this case had about equal amounts of  $\text{CaF}_2$  and  $\text{BaSO}_4$ , and both were concentrated and recovered. "Wet grind to 4-200 mesh, then use Soda Ash to make a pulp of pH 10. Then float the barite with Petroleum Sulfonate collector while retarding the  $\text{CaF}_2$  with sodium silicate. The  $\text{CaF}_2$  is then floated from the barite rougher tailings with Oleic acid, after the addition of Sodium fluoride and lignin sulfonate. The  $\text{BaSO}_4$  and  $\text{CaF}_2$  rougher froths were cleaned 3 or 4 times, respectively, to yield the final products."

"Reagent requirements for separation (per ton of feed) were as follows: 2.0 lbs Soda Ash, 4.0 lbs Sodium silicate, 0.5 lbs of petroleum Sulfonate for the Barite float. For the Fluorspar float it takes 4.00 lbs Sodium Fluoride, 5.2 lbs of Calcium lignin Sulfonate, and 0.48 lbs of Oleic acid per ton of feed"

RECOMENDATION.

This could be a small mine operation, if a buyer can be found for the ore. It will not justify milling equipment at the minesite (no water is a permanent drawback).

MELVIN H. JONES  
Mining Geologist.

D. R. Curry, Assayer

# ASSAY CERTIFICATE

14437 Rios Canyon Road  
El Cajon, Calif. 92021  
(714) 443-1754

El Cajon, Calif., 9-3 1972

I hereby Certify that the samples described below, received from  
Melvin Jones assay as follows:

OWNER'S MARK AND SAMPLE	G O L D		S I L V E R		TOTAL VALUE PER TON	PERCENTAGE OF		
	Ozs. Per Ton	Value Per Ton	Ozs. Per Ton	Value Per Ton		Copper	Lead	Zinc
A Sample	160	25280	720	2952	28232			
B "	884	139672	596	2443	1421.15			
C "	016	2528	384	4034	65.62			

Your B. sample showed some pt. minerals, also enough pt to give the gold a little lighter color.

GOLD at \$ 168.00 per oz.  
SILVER at \$ 4.10 per oz.  
LEAD at .....c  
COPPER at .....c

Charges: PAID

D.R. Curry  
Assayer

OUR MOTTO: — WHAT THERE IS IN IT, NO MORE NO LESS.

EDMUND E. PHILLIPS, Vice-Pres.—Gen. Mgr.

M. E. PHILLIPS, Secretary

# THE COLORADO ASSAYING COMPANY

(INCORPORATED)

## ASSAYERS AND CHEMISTS

303-623-2842

2244 BROADWAY

DENVER, COLORADO 80201

September 5, 1973

REPORT ON DETERMINATIONS MADE FOR —

Mr. Howard S. Gable & Melvin Jones.  
Box #946  
Kansas City, Missouri 64141

SAMPLE MARKS	METALS	Amount per Ton		PER CENT	Value per Ton	
		Ozs.	Hds.		Dollars	Cents
<p>Note: This Barite contains hard translucent white Quartz (silica) and dark red Hematite (iron oxide) as the principal impurities.</p> <p>Much of the Quartz and Hematite should be removable by medium fine grinding and a separation process. Complete removal of Iron Oxide may be difficult even by acid leaching.</p>	Barium Sulphate			81.74%		

GOLD AT \_\_\_\_\_ PER OUNCE  
LEAD AT \_\_\_\_\_ PER UNIT

SILVER AT \_\_\_\_\_ PER OUNCE  
COPPER AT \_\_\_\_\_ PER UNIT

THE COLORADO ASSAYING COMPANY

By Ed Phillips

# Reed Engineering

1140 N. Lemon Street, Orange, California 92667

## SPECTROGRAPHIC ANALYSIS

For:

\*Elements not detectable below .005%

+ +

Date: SEP 10 1973

Mr. Melvin Jones

Sample No. Red Hill

Film No. 02

+ +

Tests Recommended:

### Approximate Values

### QUALITATIVE

### Approximate Values

	Lbs. per ton	Value per ton	Percent
Aluminum	58	.58	2.9
Antimony			
Barium	54	\$1.08	2.7
Beryllium			
Bismuth			
Cadmium			
Calcium	30	.30	1.5
Cesium			
Chromium	---	---	trace
Cobalt			
Columbium			
Copper	.1	---	.005
Fluorine			
Gallium			
Gold*			
Hafnium			
Indium			
Iridium*			
Iron	18	.20	.9
Lead	20	\$3.20	1.0
Lithium	.02	---	.001
Magnesium	6	.03	.3
Manganese			
Mercury			
Molybdenum			
Nickel			
Osmium*			
Palladium*			
Platinum*			
Potassium	8	.16	.4
Rhodium*			
Rubidium*			
Ruthenium*			
Silver			
Sodium	8	.08	.4

	Lbs. per ton	Value per ton	Percent
Strontium	.2	---	.01
Tantalum			
Thallium			
Thorium			
Tin			
Titanium	12	\$1.20	.6
Tungsten			
Vanadium			
Zinc			
Zirconium			

### RARE EARTHS : none

	Lbs. per ton	Value per ton	Percent
Cerium			
Dysprosium			
Erbium			
Europium			
Gadolinium			
Holmium			
Lanthanum			
Lutetium			
Neodymium			
Praseodymium			
Samarium			
Terbium			
Thulium			
Ytterbium			
Yttrium			

Silicon, Water, Gases----- 89.2<sup>Percent</sup>

### RADIOMETRIC ASSAY

(e) Uranium Oxide trace Percent

C-3

# Reed Engineering

1140 N. Lemon Street, Orange, California 92667

## SPECTROGRAPHIC ANALYSIS

For:

\*Elements not detectable below .005%

Date: SEP 10 1973

Sample No. **Black**

Mr. Melvin Jones  
Box 406  
Wickenburg, AZ 85358

Film No. 01

Tests Recommended:

	Approximate Values		
	Lbs per ton	Value per ton	Percent
Aluminum	6	.06	.3
Antimony			
Barium	62	\$1.24	3.1
Beryllium			
Bismuth			
Cadmium			
Calcium	400	\$4.00	20.0
Cesium			
Chromium			
Cobalt			
Columbium			
Copper	.04	---	.002
Fluorine			
Gallium			
Gold*			
Hafnium			
Indium			
Iridium*			
Iron	78	.94	3.9
Lead	12	\$1.92	.6
Lithium	---	---	trace
Magnesium	18	.09	.9
Manganese	38	\$3.80	1.9
Mercury			
Molybdenum			
Nickel			
Osmium*			
Palladium*			
Platinum*			
Potassium	18	.36	.9
Rhodium*			
Rubidium*			
Ruthenium*			
Silver			
Sodium	30	.30	1.5

### QUALITATIVE

	Approximate Values		
	Lbs per ton	Value per ton	Percent
Strontium	20	.60	1.0
Tantalum			
Thallium			
Thorium			
Tin			
Titanium	.2	---	.01
Tungsten			
Vanadium			
Zinc			
Zirconium			

### RARE EARTHS : none

	Lbs per ton	Value per ton	Percent
Cerium			
Dysprosium			
Erbium			
Europium			
Gadolinium			
Holmium			
Lanthanum			
Lutetium			
Neodymium			
Praseodymium			
Samarium			
Terbium			
Thulium			
Ytterbium			
Yttrium			

Silicon, Water, Gases----- 65.9 Percent

### RADIOMETRIC ASSAY

(e) Uranium Oxide 0.0 Percent

C-9

OUR MOTTO: — WHAT THERE IS IN IT, NO MORE NO LESS.

EDMUND E. PHILLIPS, Vice-Pres.—Gen. Mgr.

M. E. PHILLIPS, Secretary

# THE COLORADO ASSAYING COMPANY

(INCORPORATED)

## ASSAYERS AND CHEMISTS

303-623-2842

2244 BROADWAY

DENVER, COLORADO 80201

November 23, 1973

### REPORT ON DETERMINATIONS MADE FOR —

Mr. Melvin W. Jones & Mr. Howard S. Gable  
P. O. Box #406  
Wickenburg, Arizona 85358

SAMPLE MARKS	METALS	Amount per		PER CENT	Value per Ton	
		Oz	Hds		Dollars	Cents
Nov. sample	Calcium Fluoride			4.53%		

THE COLORADO ASSAYING COMPANY

GOLD AT \_\_\_\_\_ PER OUNCE

SILVER AT \_\_\_\_\_ PER OUNCE

LEAD AT \_\_\_\_\_ PER UNIT

COPPER AT \_\_\_\_\_ PER UNIT

By Ed Phillips

C-5

OUR MOTTO: — WHAT THERE IS IN IT, NO MORE NO LESS.

EDMUND E. PHILLIPS, Vice-Pres.—Gen. Mgr.

M. E. PHILLIPS, Secretary

# THE COLORADO ASSAYING COMPANY

(INCORPORATED)

## ASSAYERS AND CHEMISTS

303—623-2842

2244 BROADWAY

DENVER, COLORADO 80201 November 30, 1973

### REPORT ON DETERMINATIONS MADE FOR —

Mr. Melvin H. Jones & Mr. Howard S. Gable  
Box #406  
Wickenburg, Arizona. 85358

SAMPLE MARKS	METALS	Amount per		PER CENT	Value per Ton	
		Ozs.	Ton Hds.		Dollars	Cents
Nov. 4th	Barium Sulphate			78.36%		

THE COLORADO ASSAYING COMPANY

GOLD AT \_\_\_\_\_ PER OUNCE  
LEAD AT \_\_\_\_\_ PER UNIT

SILVER AT \_\_\_\_\_ PER OUNCE  
COPPER AT \_\_\_\_\_ PER UNIT

By Ed Phillips

D. R. Curry, Assayer  
 14437 Atlas Canyon Road  
 El Cajon, Calif. 92021

# ASSAY CERTIFICATE

El Cajon, Calif., 8-14 1973

I hereby Certify that the samples described below, received from  
Melvin Jones assay as follows:

OWNER'S MARK AND SAMPLE	GOLD		SILVER		TOTAL VALUE PER TON	PERCENTAGE OF		
	Oz. Per Ton	Value Per Ton	Oz. Per Ton	Value Per Ton		Copper	Lead	Zinc
Lead Pill	0 88	83 60	6 52	17 27				
Iron Queen	0 96	91 20	1 04	2 76				
Red Top	0 44	41 80	1 36	3 60				

GOLD at \$ 25.00 per oz.  
 SILVER at \$ 16.50 per oz.  
 LEAD at \_\_\_\_\_  
 COPPER at \_\_\_\_\_

*[Handwritten signature]*  
5-10-73

OUR MOTTO: — WHAT THERE IS IN IT, NO MORE NO LESS.

EDMUND E. PHILLIPS, Vice-Pres.—Gen. Mgr.

M. E. PHILLIPS, Secretary

# THE COLORADO ASSAYING COMPANY

(INCORPORATED)

## ASSAYERS AND CHEMISTS

303-623-2842

2244 BROADWAY

DENVER, COLORADO 80201

August 21, 1973

REPORT ON DETERMINATIONS MADE FOR —

Mr. Howard S. Gable & Mr. Melvin H. Jones  
Box #946  
Kansas City, Missouri 64141

SAMPLE MARKS	METALS	Amount per		PER CENT	Value per Ton	
		Ozs.	Ton Hds.		Dollars	Cents
Identification: This sample is soft white crystalline Calcite (calcium carbonate with some magnesium carbonate) and brown-black Manganite (manganese oxides). A little heavy white Cerussite (lead carbonate) is present.	Silver		0.50		\$1.25	
	Lead			0.95%	\$2.37	

GOLD AT \_\_\_\_\_ PER OUNCE

SILVER AT \_\_\_\_\_ PER OUNCE

LEAD AT \_\_\_\_\_ PER UNIT

COPPER AT \_\_\_\_\_ PER UNIT

THE COLORADO ASSAYING COMPANY

By E. Phillips

C-8

August 4, 1973

RECONNAISSANCE GEOLOGY EXAMINATION OF MINING CLAIMS IN VICINITY OF  
POTTS MOUNTAIN, MAJORE COUNTY, ARIZONA.

In compliance with a request of Mr. Howard Gable, Kansas City, Mo., a rapid and preliminary examination was made of mining claims having copper, fluor spar, barite, lead, silver (and uranium?) in the vicinity of Potts mountain, adjoining Webster basin, Majore County, Arizona. These claims are about 75 miles Northwest of Wickenburg, Arizona, and North of Almo lake. This trip was made on August 3, 1973.

At Wickieup, Arizona, the writer met Mrs. Pearl Craig, 4180 Skylark Road, Kingman, Arizona (phone 757-4249), and her husband, and proceeded to the mining properties via the chicken springs road to the West. Mrs. Craig explained that the claims are valid and owned by an investors group (incorporated in Nevada) of which she is a member and spokesman. This lady proved very knowledgeable in mining matters. The respective properties visited and pertinent remarks pertaining to same, follows (See map, marked inclosure No.1).

BARYTES COPPER CLAIMS.

This property consists of 38 claims located in T-11-N, R-14-W, Sections 1,12 (and T-11-N, R-13-W, Sec. 6,7). See Mrs. Craig's map (Incl #2). These claims are North of the Rawhide Mine and East of Miller mountain. I was told that some drilling has been accomplished on these copper claims by a Canadian mining company (Magna ?) that had a lease on the large and well known McCracken Mine (Pb, Ag) to the Northwest. Drilling logs (and drilling data) was not given to Mrs. Craig and associates. Also, at one location called the "pit" where there is a 12 foot exposure of commercial copper ore, a small operator who had a lease on the property drilled 32 holes. Mrs. Craig has a map that shows these DH's that has Cu assay data placed on same by Mike O'Leary, Mining engineer. She did not have this map with her, but promised to give me copy.

At this point, it would be well to point out that these claims are in the Rawhide mountain range which is predominately Redwall and Martin limestones (Miss. and Dev.). There are small Cu outcrops here and there in this limestone formation and two large exposures were pointed out to me. These exposures were disseminated copper in zone of oxidation setting. (Cuprite, Tenorite, Malachite). At one location known as the "cut", some bulldozer clearing has been accomplished and there were several drill holes present. This drilling apparently is of shallow depth, only. The ore body is tabular and strikes about E-W and dips to the N about 20 Deg. Two samples were taken, one at about a 6 foot exposure (rough channel cut) and a grab sample about 100 feet South, from the surface.

Following this we proceed<sup>ed</sup> to what is known as the "pit". Here extensive bulldozer cuts are present and some drilling was accomplished. (See remarks in 2nd paragraph above). At this location, there is a 12 foot exposure of copper ore (where a sample was taken) and in general, a large area of tabular ore can be seen (similar to that described as the "cut" above).

After this, we proceeded to what is marked "shaft" on map. This, I am told is an old uranium prospect. This is an inclined shaft with a depth of about 60 feet with the remains of an old headframe above. I had

my geiger meter was going, but unfortunately it chose not to work at this time (battery dead). Mrs. Craig tells me that she took a sample from the dump and had a report of .16%  $U_3O_8$ , and that the ore was uraninite. This is hard to believe by the writer. A sample of the ore was taken from a small cut near the shaft, it shows a little Cu and a small amount of  $CaF_2$ . This alleged ore body does not look commercial to me.

On the copper property, I would prefer not to render an opinion on the same now, but might do so after examining the assay returns and available drilling data. I might point out that there are also copper claims in Ester basin, but these deposits have the reputation of being shallow.

#### LEAD PILL MINE (Fluorspar, Lead, Silver).

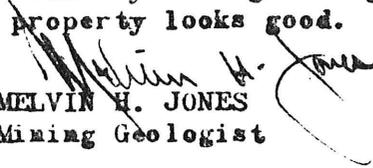
Following visiting the copper property, we proceed North 5.7 miles to a road going West to Potts mountain and the Lead Pill mine (on the East slope). At this property there are three levels of adits going into the mountain with many raises, stopes and drifts. A great deal of work has been done in the past and the mine produced lead and silver, according to Mrs. Craig. The mine is in a shist and has been extensively timbered in the past, but the mine is dangerous and numerous caveins are evident. There are numerous fissures, small veins, and pockets containing white to green fine grained flourite. Mrs. Craig tells me that one sample taken from the mine had 23%  $CaF_2$ , 8 oz Ag, and about 1% Pb. The latter is probably a carbonate (anglesite). At one location about 2 1/2 feet of commercial fluorspar shows at a portal.

Mrs. Craig tells me that her group hold this old mine with 3 claims called Florinae. Samples were taken by the writer and I would like to see the assay reports before making serious comments on this property. It should be understood that Flourite (and Barite) are introduced minerals and normally foreign to the rocks in which they are found. They are the replacement procedure. As a rule (that is not always followed these days), Fluorspar should be at least 30% before it is considered an economically feasible property. But with the Lead Pill mine, this would be mostly a metallurgy problem to be solved, and recovering all values.

#### BARITE (Red Top Mine).

After leaving the Lead Pill mine, we returned to the main road and proceeded North 1/2 mile to another road to the West going to the other side of Potts mountain. At the Barite location there is an old shaft and exploration adit about 200 feet below. At the Shaft, nothing much could be ascertained as there was no ladder, but a good grade of Barite was on the dump. At the adit below, a 3 foot vein of high grade barite is followed for about 50 feet. Across the canyon from the portal, an 18 foot wide exposure of Barite was pointed out to me. As the day was growing short, we did not walk over to this deposit. Apparently, there are several barite exposures in this area. Mrs. Craig tells me that they hold this Barite with 3 "Weston" claims and that samples show a 4.8 S.G. (Commercial ore runs from 4.3 to 4.6 S.G.). Samples were taken.

Barite deposits are widespread and choice of a deposit depends on geography rather than geology. This is due to weight and high transportation costs. Usually recovery of high grade barite is done by fine grinding and flotation to get rid of impurities and gangue. This property looks good.

  
MELVIN H. JONES  
Mining Geologist

AMENDMENT NO. 1 TO:

PRELIMINARY GEOLOGY EVALUATION REPORT ON THE WESTON CLAIMS,  
POTTS MOUNTAIN, OWENS MINING DISTRICT, MOHAVE COUNTY, ARIZONA.  
dated August 31, 1974.

The remarks in the above report are amended to show there are seven (7) Weston lode mining claims (instead of the six (6) outlined in said report.). See attached letter from Jan Daily, dated September 6, 1974.

The location of Weston claim number 7, is unknown to the undersigned. It is presumed to be North of Weston claim number 6 .

September 7, 1974.

ELVIN H JONES  
Mining geologist.